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~~piperidein, piperazine, morpholine or thiomorpholine which can be unsubstituted or substituted on carbon with one or more substituents optionally selected from C₁-3alkyl, or C₁₋₃alkyl substituted optionally with OH, OC₁₋₃alkyl, or phenyl which can be unsubstituted or substituted optionally with halogen, CF₃, OC₁₋₃alkyl, or C₁₋₃alkyl, or substituted on nitrogen with C₁₋₄alkoxy or phenyl which can be unsubstituted or substituted optionally with halogen, CF₃, OC₁₋₃alkyl, or C₁₋₃alkyl;~~

n is 2 to 4;

m is 0, 1 or 2

and any pharmaceutically acceptable salts or solvates in a pharmaceutically acceptable carrier.

New pages showing the claims as amended is included with this Amendment.

REMARKS

Claims 1, 2, 5, 6, 9, 10, 14, 17, 18, 21, 25, 26, 34, 39, 40, 43, and 44 have been amended; Claim 34 has been cancelled; Claims 1, 2, 5, 6, 9, 10, 13, 14, 17, 18, 21, 22, 25, 26, 34, 39, 40, 43, 44, and 47 are pending. Claims 3, 4, 7, 8, 11, 12, 15, 16, 19, 20, 23, 24, 27-33, 35-38, 41, 42, 45, 46, 48, and 49 have been withdrawn as being drawn to a non-elected group.

Claims 1, 2, 5, 6, 9, 10, 13, 14, 17, 18, 21, 22, 25, 26, 34, 39, 40, 43, 44, and 47 have been rejected under 35 U.S.C. § 112, second paragraph. In view of the amendments and discussion set forth below, these rejections are moot.

- i) The term "heteroaromatic ring" is not unclear as it refers to thiophene, furan, pyrrole, pyridine, pyrimidine, pyridazine, and pyrazine defined on page 12, lines 15 and 16.
- ii) Applicants have added the suggested punctuation throughout the claims, specifically in R², R³R⁴, R⁵R⁶, and R⁷R⁸.
- iii) The definition of R⁷ and R⁸ has been amended to clarify the language "heterocyclic ring of 5 to 8 atoms..."
- iv) The claims have been amended to read "or a pharmaceutically acceptable salt or solvate."
- v) Claims 13, 14, 25, and 26 have been amended to clarify "retinal diseases."
- vi) Claim 34 has been cancelled.

Claims 17, 18, 21, 22, 25, 26, 43, and 44 are objected to as being substantially duplicates of each other. Applicants respectfully disagree.

Claims 17 and 18 differ by the substituent variably substituted on the six membered ring as well as the substitution on the ring nitrogen. Claims 17 and 18 are directed to compositions for lowering intraocular pressure whereas Claims 21 and 22 are directed to compositions for improving blood flow to the optic nerve head and retina and Claims 25 and 26 are directed to treating specific retinal diseases. Claims 43 and 44 are directed to compositions in general.

Claims 1, 2, 17, 18, 21, 22, 25, 26, 39, 40, 43, and 44 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Loev (U.S. Patent No. 3,303,189). Applicants respectfully traverse the rejection. All of the compounds disclosed in '189 are benzothiazines wherein the sulfur atom (S) occupies ring position two and the nitrogen atom (N) is in the one position. In the present application the compounds are benzothiazines, but the sulfur atom (S) occupies ring position one and the nitrogen atom (N) is in ring position two. Reconsideration is respectfully requested.

Claims 1, 2, 17, 18, 21, 22, 25, 26, 39, 40, 43, and 44 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Mizuno, et al. (U.S. Patent No. 6,271,223). Applicants respectfully traverse the rejection. Respectfully the § 102(e) date for Mizuno et al. is August 26, 1999. The present application claims priority from May 19, 1998. Such priority was claimed in the Declaration filed with the present application. The application itself has been amended to claim priority. Nevertheless, the compounds of Mizuno, et al. differ from the claimed compounds in that the piperazine substituent of Mizuno, et al. requires an aryl group, see the definition of D in column 3. The present compounds do not include such an aryl group. Reconsideration is respectfully requested.

Claims 1, 2, 5, 6, 9, 10, 13, 14, 17, 18, 21, 22, 25, 26, 34, 39, 40, 43, 44, and 47 have been rejected under 35 U.S.C. § 102(b) as being anticipated by May, et al. (U.S. Patent No. 5,538,966). In view of the amendments to R², this rejection is now moot. However, claims 39 and 40 were not so amended as these claims are directed to treating persons suffering from a variety of conditions not disclosed or suggested in May, et al. Reconsideration is respectfully requested.

Claims 1, 2, 17, 18, 21, 22, 25, 26, 39, 40, 43, and 44 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Loev '189. Applicants respectfully traverse the rejection. These compounds are structurally very different from the claimed compounds

above as described. The alkyl amino substituent on the ring nitrogen atom in Loev, et al. provides for a very different stereo relationship to the aryl group of the compound. Reconsideration is respectfully requested.

Claims 1 2, 5, 6, 9, 10, 13, 14, 17, 18, 21, 22, 25, 26, 34, 39, 40, 43, 44, and 47 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over May et al., '966. In view of the amendments, this claim is now moot. With the primary sulfonamide taken out of the definition of R² the compounds of the present invention are not suitable for use as carbonic anhydrase inhibitors as described in May, et al. as the primary sulfonamide is necessary for inhibition of carbonic anhydrase. Reconsideration is respectfully requested.

The Examiner has indicated that the Information Disclosure Statement fails to comply with 37 C.F.R. 1.98(a)(2). The Examiner has indicated that all of the journal articles and two PCT publications are missing. Applicants are unsure what the Examiner did receive, however, as set forth in the Information Disclosure Statement filed on October 31, 2000, Applicants believe all of the citations referred to therein were submitted. However, copies of all U.S. and foreign patents and publications are again provided with this amendment.

Applicants' claims are in condition for allowance and notice thereof is respectfully requested.

Respectfully submitted,

Date

May 16, 2002

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